WE CLAIM AS OUR INVENTION:

1. A device for fixing toner images on a carrier web, comprising:

a fixing chamber in which toner images present on the carrier web are charged with a solvent vapor;

respective gaps via which the carrier web is supplied to and carried away from the fixing chamber;

a rinsing chamber exterior to the fixing chamber and located before at least of the gaps, one gap in the rinsing chamber solvent vapor exiting from the at least one gap being mixed with air and the mixture being drawn off;

at least a portion of the drawn-off mixture being fed to a condenser that condenses and separates at least one solvent; and

air exiting the condenser being re-supplied to the rinsing chamber.

2. The device according to claim 1 wherein the air re-supplied to the rinsing chamber is supplied at least partially with a direction of flow that is directed from an opening for the carrier web into the rinsing chamber toward the gap.

3. The device according to claim 1 wherein the air re-supplied to the rinsing chamber is divided and the divided air streams are guided as symmetric counter streams.

4. The device according to claim 3 wherein a partial air stream entrains the solvent vapor exiting from the gap and another partial air stream entrains outdoor air entering via the carrier web opening.

5. The device according to claim 1 wherein the rinsing chamber is located after an exit gap in the fixing chamber as viewed in a transport direction of the carrier web.

6. The device according to claim 5 wherein the rinsing chamber has a sealing roller in an area of exit of the carrier web, said sealing roller contacting the carrier web.

7. The device according to claim 6 wherein the sealing roller is in contact with a sealing lip.

8. The device according to claim 6 wherein the sealing roller comprises a toner-repellent material on its surface.

9 The device according to claims 1 wherein air supplied to the rinsing chamber is directed at the toner images and dries them.

10. The device according to claim 1 wherein the solvent separated by the condenser is re-supplied to a solvent circuit.

11. The device according to claim 1 wherein a portion of dried air is fed back to the condenser and another portion is directly re-supplied to the rinsing chamber.

12. The device according to claim 1 wherein the solvent separated by the condenser is fed to a separator in which water is separated from the solvent.

13. The device according to claim 12 wherein a distiller is employed as the separator.

14. The device according to claim 1 wherein the condenser is arranged at one of outside the rinsing chamber and inside the rinsing chamber.

15. The device according to claim 1 wherein the carrier web is provided with toner images only on one side, said toner images being charged with solvent vapor only on one side.

16. The device according to claim 1 wherein the carrier web is provided with toner images on both sides, fixing devices with solvent vapor and for rinsing of the carrier web being arranged on both sides of the carrier web.

17. The device according to claim 1 wherein the carrier web is provided with toner images on both sides; and

devices for fixing and rinsing being arranged such that first one side of the carrier web with toner images is fixed, and then subsequently another side with toner images is fixed.

18. A method for fixing toner images on a carrier web, comprising the steps of:

supplying the carrier web to and carrying it away from a fixing chamber via respective gaps;

in the fixing chamber charging the toner images present on the carrier web with a solvent vapor;

in front of at least one of the gaps arranging a rinsing chamber in which solvent vapor exiting from the gap is mixed with air and the mixture is drawn off;

feeding at least a portion of the drawn-off mixture to a condenser which condenses and separates solvents; and

re-supplying air exiting the condenser to the rinsing chamber.

19. The method according to claim 18 wherein the air supplied to the rinsing chamber is at least partially supplied with a direction of flow that is directed from a carrier web opening in the rinsing chamber toward the gap.

20. The method according to claim 18 wherein the air which is re-supplied to the rinsing chamber is divided and streams of the divided air are guided as symmetric counter streams.

21. A device for fixing toner images on a carrier web, comprising:

a fixing chamber in which toner images present on the carrier web are charged with a solvent vapor;

respective gaps via which the carrier web is supplied to and carried away from the fixing chamber;

respective first and second rinsing chambers exterior to the fixing chamber and located adjacent the respective gaps, in the rinsing chamber solvent vapor exiting from the gaps being mixed with air and the mixture being drawn off;

at least a portion of the drawn-off mixture being fed to a condenser that condenses and separates at least one solvent; and

air exiting the condenser being re-supplied to the first and second rinsing chamber.

22. A method for fixing toner images on a carrier web, comprising the steps of:

supplying the carrier web to and carrying it away from a fixing chamber via respective gaps;

in the fixing chamber charging the toner images present on the carrier web with a solvent vapor;

adjacent each of the gaps arranging a respective rinsing chamber in which solvent vapor exiting from the gap is mixed with air and the mixture is drawn off;

feeding at least a portion of the drawn-off mixture to a condenser which condenses and separates solvents; and

re-supplying air exiting the condenser to the rinsing chambers.